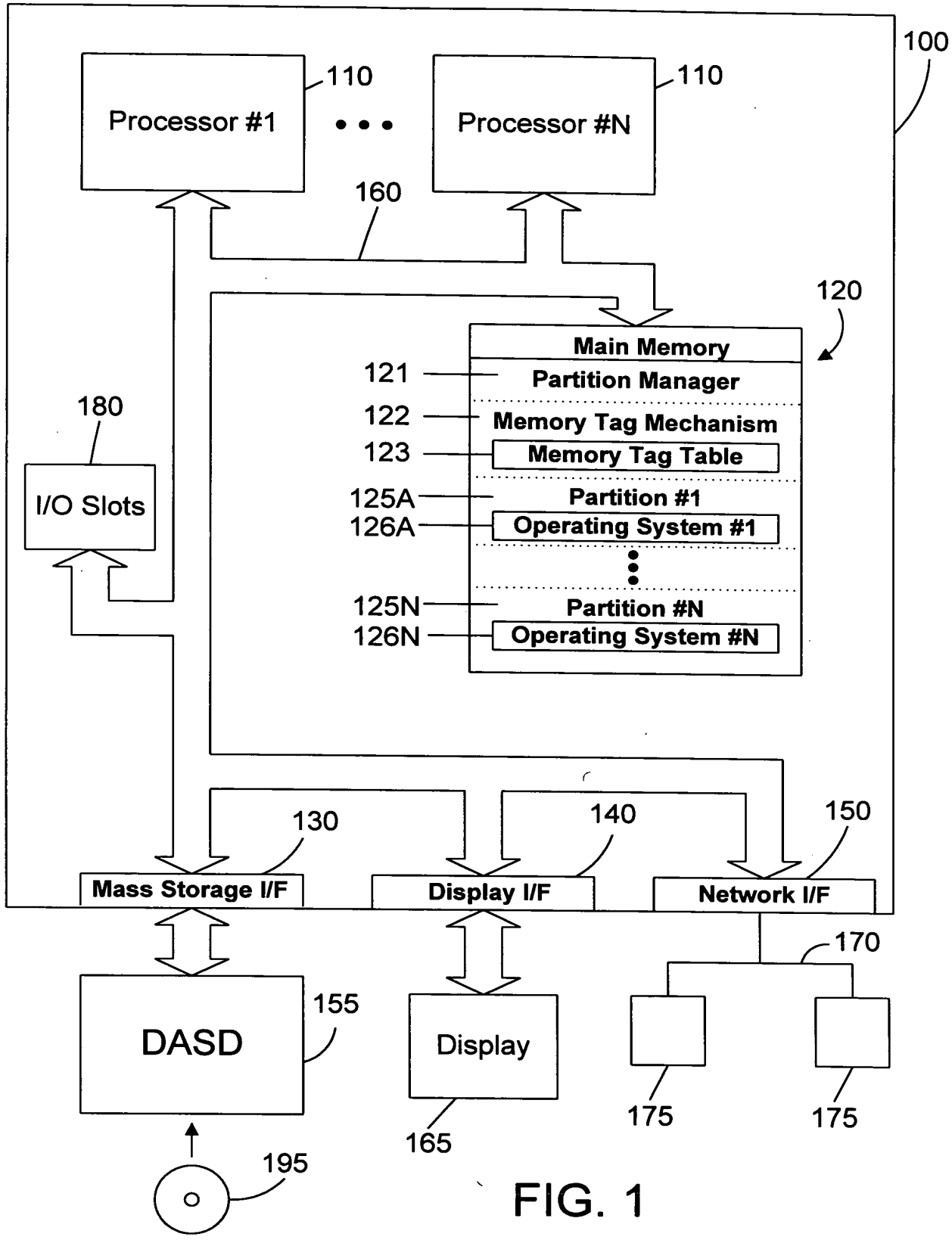
100
Processor #1
110
Processor #N
110
160
120
Main Memory
121
Partition Manager
122
Memory Tag Mechanism
123
Memory Tag Table
125A
Partition #1
126A
Operating System #1
125N
Partition #N
126N
Operating System #N
180
I/O Slots
130
140
150
Mass Storage I/F
Display I/F
Network I/F
170
DASD
155
Display
165
175
175
195

FIG. 1

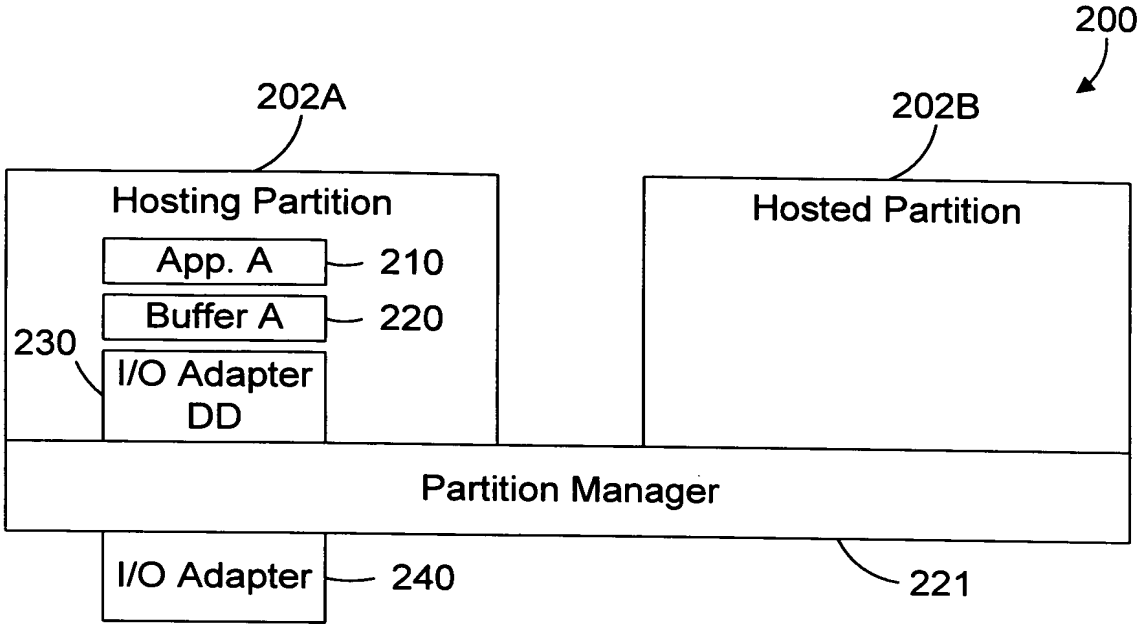

FIG. 2 Prior Art

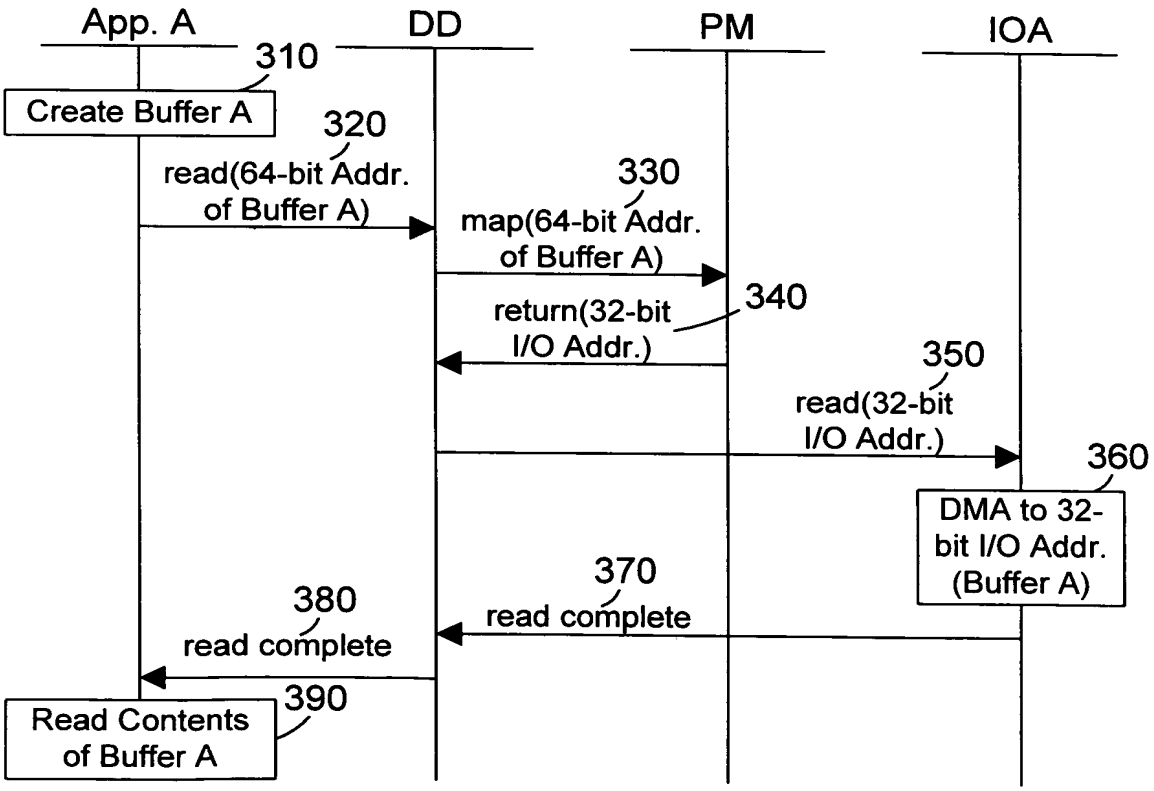

FIG. 3 Prior Art

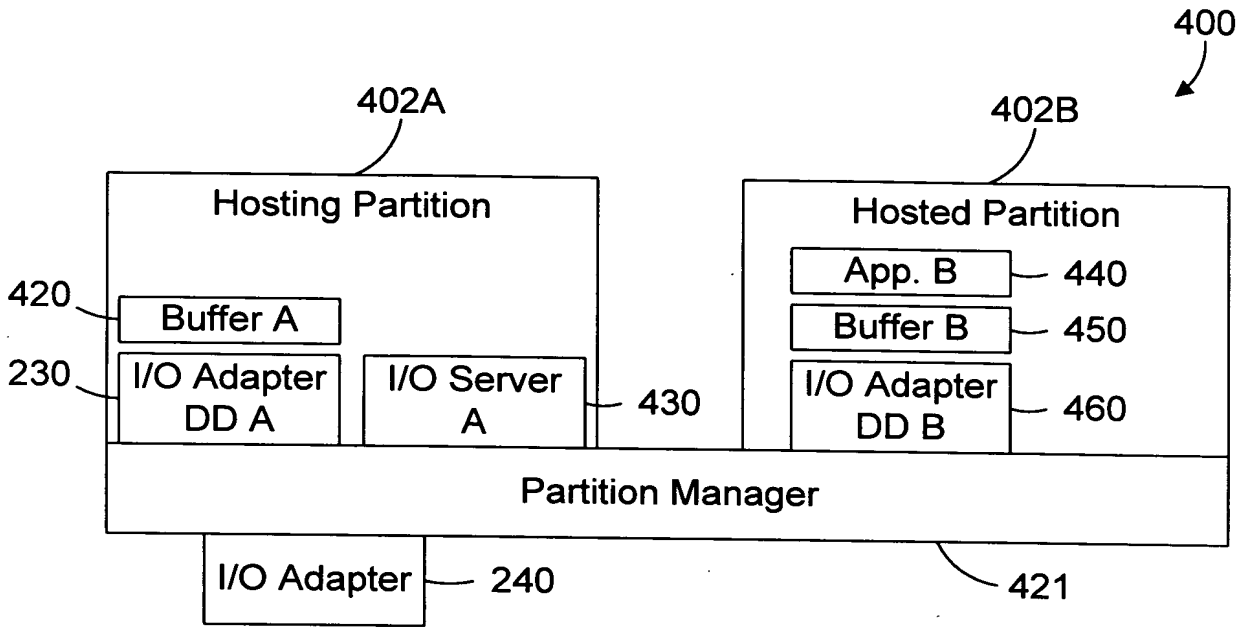

FIG. 4 Prior Art

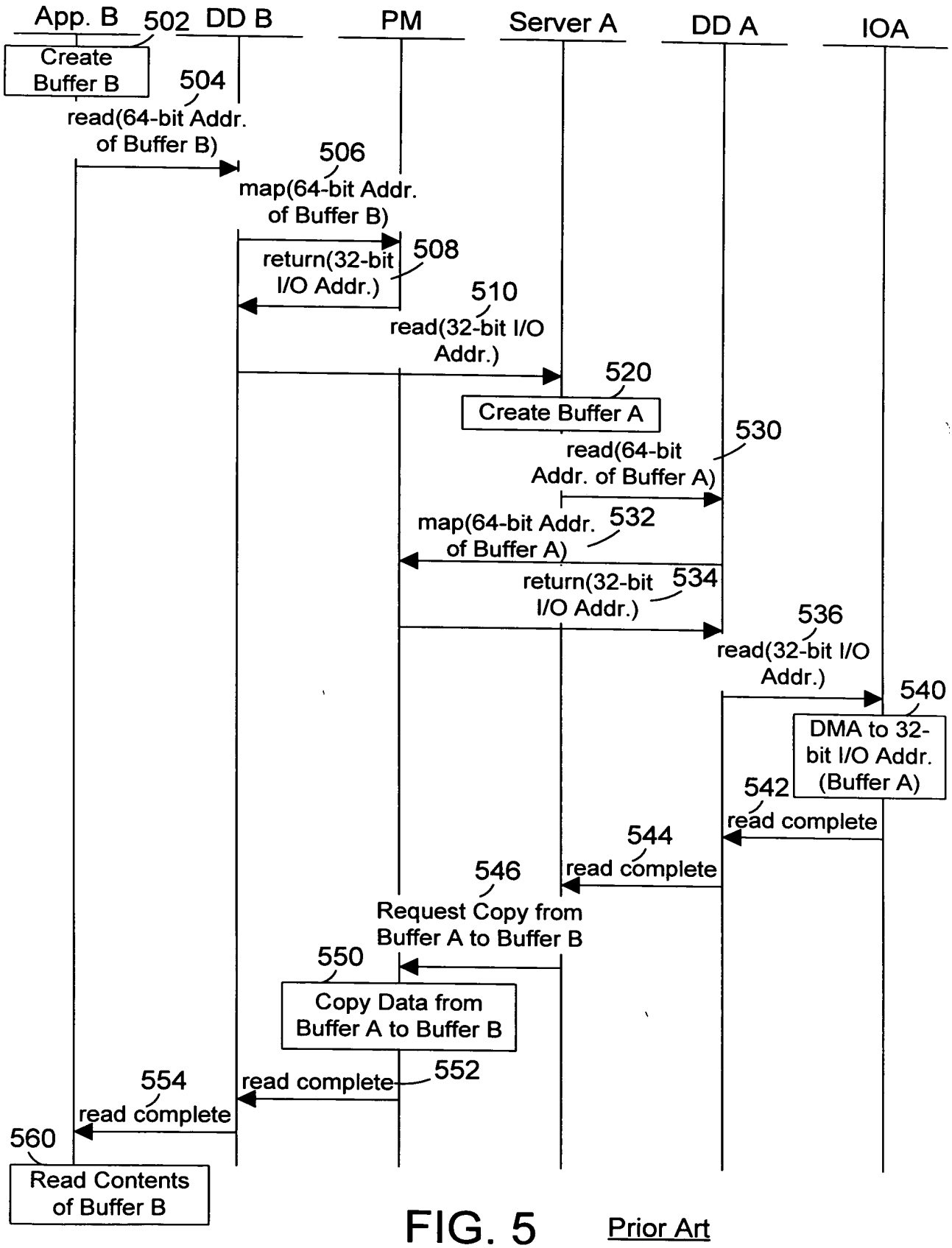

FIG. 5 Prior Art

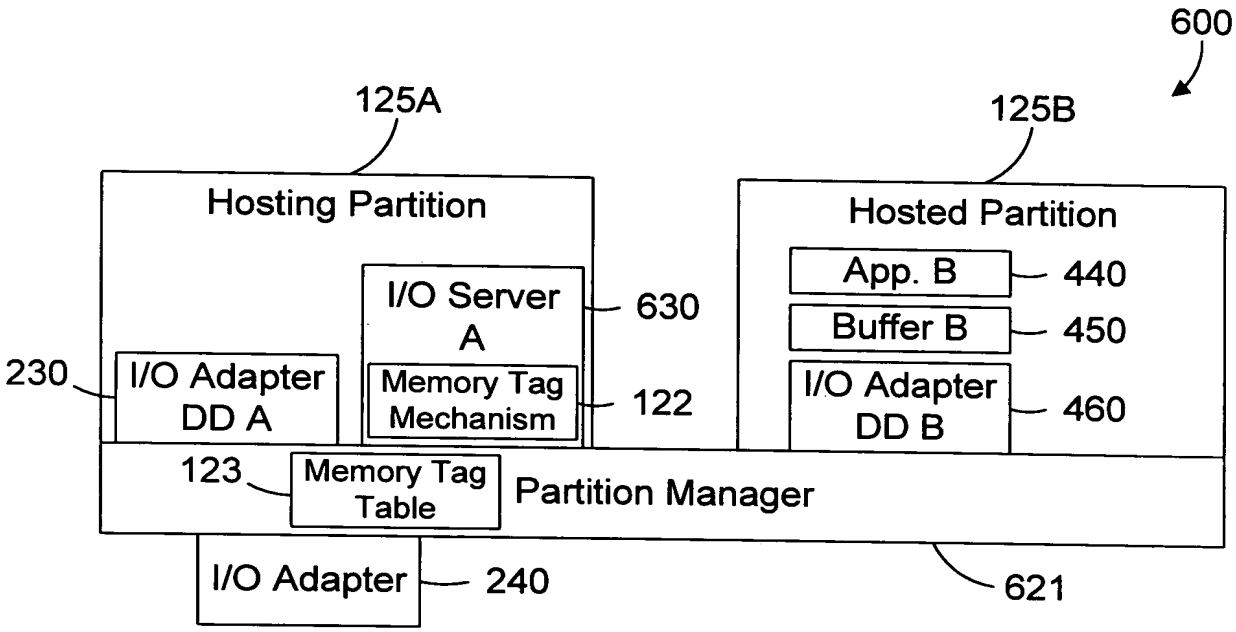
600
125A
125B
Hosting Partition
Hosted Partition
I/O Server A
630
App. B
440
Buffer B
450
230
I/O Adapter DD A
Memory Tag Mechanism
122
I/O Adapter DD B
460
123
Memory Tag Table
Partition Manager
I/O Adapter
240
621

FIG. 6

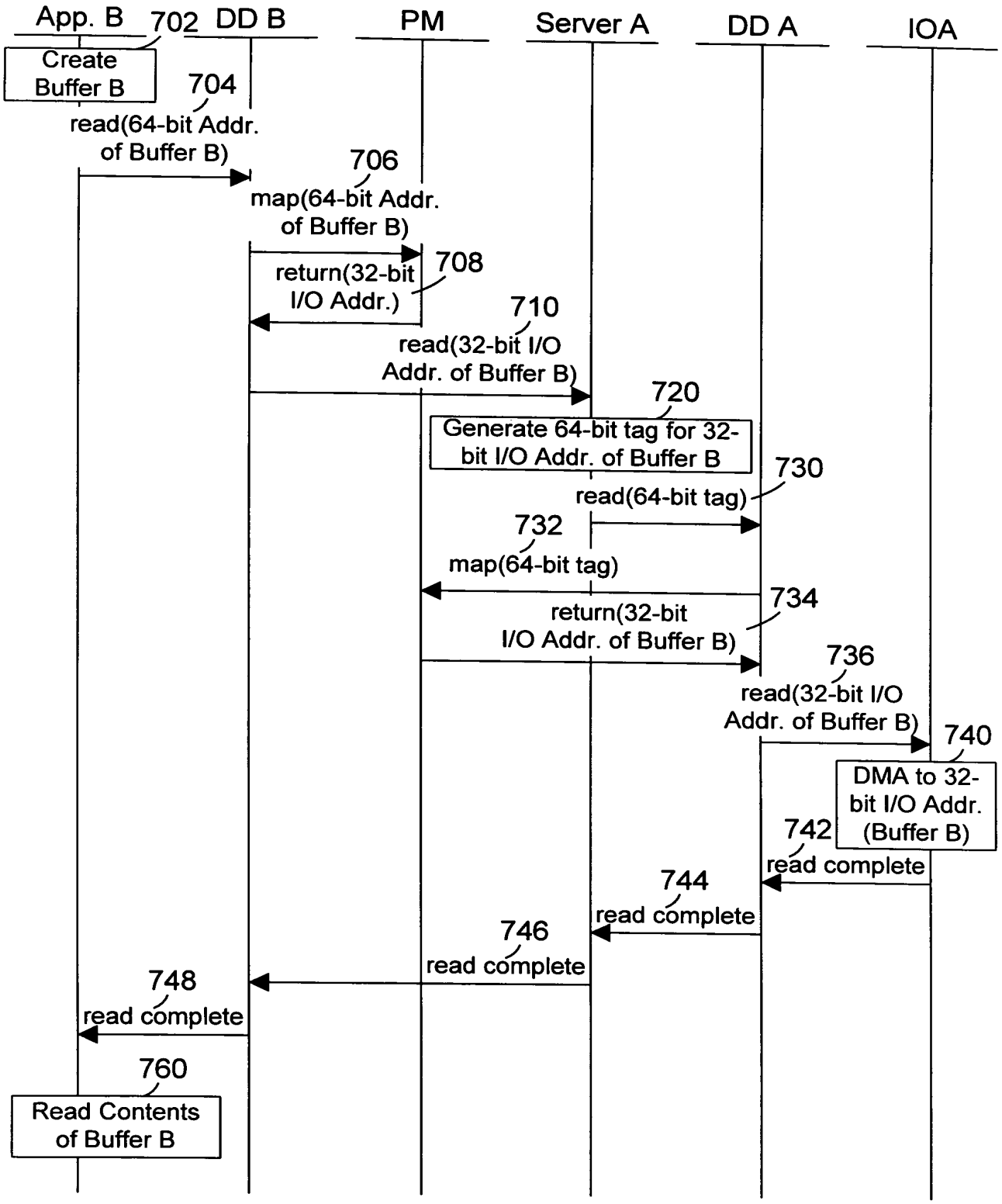
App. B
DD B
PM
Server A
DD A
IOA
Create Buffer B
702
704
read(64-bit Addr. of Buffer B)
706
map(64-bit Addr. of Buffer B)
708
return(32-bit I/O Addr.)
710
read(32-bit I/O Addr. of Buffer B)
720
Generate 64-bit tag for 32-bit I/O Addr. of Buffer B
730
read(64-bit tag)
732
map(64-bit tag)
734
return(32-bit I/O Addr. of Buffer B)
736
read(32-bit I/O Addr. of Buffer B)
740
DMA to 32-bit I/O Addr. (Buffer B)
742
read complete
744
read complete
746
read complete
748
read complete
760
Read Contents of Buffer B

FIG. 7

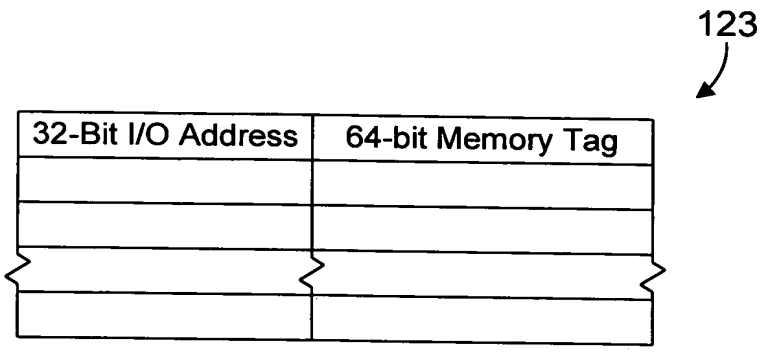

FIG. 8